

ultimate segment has its entire hinder edge carinate, but is without the sharply limited short carina found in the other two species.

The female is like that of the typical species, except that the elytra are rather more shining and have a well-marked callosity beyond the middle of the outer margin, the scutellum is a little longer, more pointed, and more punctured, and the pygidium is more even and very finely coriaceous, like the last ventral segment.

The colouring is no doubt rather variable in this species, as in *P. harringtoni*. Several specimens have been sent by the discoverer.

XLV. — *New Foxes of the Genera Cerdocyon and Pseudalopex from Northern Argentina.* By OLDFIELD THOMAS.

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IN the course of his explorations Sr. Budin has sent home seven foxes from Northern Argentina, four being members of *Cerdocyon* and three of *Pseudalopex*. The former are referable to two definable forms—both new,—respectively from Tucuman and Jujuy, while of the latter two specimens are the common *P. gracilis*, Burm., while a little fox from Chumbicha, Catamarca, seems again to represent a new species.

The following cranial differences between *Cerdocyon* and *Pseudalopex* may be worth mentioning here:—

If the lower jaw be put in position, the premolars, upper and lower, closely touch or overlap in *Cerdocyon*, but in *Pseudalopex* they remain always some distance apart.

On laying the skulls on a flat surface, jaw in position, that of *Cerdocyon* stands with the tooth-row horizontal, and the back of the skull as well as the mandibular angle high off the supporting surface; but that of *Pseudalopex* lies backwards, the tooth-row at a considerable angle with the horizon, the bullæ and condyles nearly, and the mandibular angle quite, touching the support.

Cerdocyon tucumanus, sp. n.

Allied to the large *C. mimax*, but lighter-coloured throughout.

Size practically as in *mimax*, therefore larger than in *brasiliensis*. General colour above clear grizzled grey, with less fulvous or clay-coloured suffusion than in *mimax*. Under surface lighter throughout, the chin brown instead of black, the throat whitish, succeeded by a pale instead of dark brown band; chest white, belly soiled whitish instead of the strong clay-colour of *mimax*; inguinal region white. Back of ears dull clay-colour instead of black. Hands and feet brown grizzled with white, instead of being almost wholly black. Tail very bushy, the light ends and subterminal bands of the hairs conspicuously whitish, in marked contrast to the sordid clay-colour found in *mimax*.

Skull very similar to that of *mimax*, though a little smaller, but still decidedly greater in length than that of *brasiliensis* and the other species. Nasals surpassing the premaxilla posteriorly, falling short of them in the one specimen of *mimax*. Bullæ comparatively large.

Molars large, about as in *mimax*, larger than in *brasiliensis*.

Dimensions of the type:—

Head and body 632 mm.; tail 340; hind foot 141; ear 74.

Skull: greatest length 145; condylo-basal length 143; zygomatic breadth 78; nasals on middle line 48; interorbital breadth 26; intertemporal breadth 31; postorbital process to deltoid ridge 66; breadth of brain-case 47; palatal length 70. P^4 on outer edge 13; combined length of m^1 and m^2 19.5; greatest diameter of m^1 14.

Hab. Neighbourhood of Tucuman. Type from Vupos, alt. 500 m. Another specimen from Tapia.

Type. Adult female. B.M. no. 21. 1. 5. 29. Original number 1203. Collected 11th October, 1920, by E. Budin. Presented by Oldfield Thomas.

Readily distinguishable from other forms of *Cerdocyon* by its light under surface and more whitish tail.

Cerdocyon thous jucundus, subsp. n.

Coloured like *C. t. brasiliensis*, but skull shorter, stouter, and heavier.

External appearance very much as in *brasiliensis*, the colour consequently darker than in *tucumanus*. Under surface

soiled drabby, quite as in average *brasiliensis*, the throat, chest, and inguinal region lighter, but not white; chin grizzled smoky, not black. Back of ears dull brownish clay-colour, not blackened terminally. Hands dark grizzled brown, a blacker patch on the metacarpus; feet blackish, with a fulvous suffusion proximally. Inner side of hind limbs clay-colour. Tail as in *brasiliensis*, with a buffy tinge on the lighter parts of the hairs.

Skull peculiarly short, stout, and heavily built, the inter-orbital region very broad and much swollen. Bullæ rather small. Teeth stout.

Dimensions of the type:—

Head and body 635 mm.; tail 290; hind foot 130; ear 70.

Skull: greatest length 123; condylo-basal length 129; zygomatic breadth 76·5; nasals on middle line 45; inter-orbital breadth 28·5; intertemporal breadth 35; postorbital process to deltoid ridge 60; breadth of brain-case 47; height of crown from middle of pterygoid 42; palatal length 63. P^4 on outer edge 12; combined length of m^1 and m^2 16·5; greatest diameter of m^1 12·7.

Hab. Sierra de Santa Barbara, Eastern Jujuy. Type from Sunchal, alt. 1000 m. Another specimen from San Rafael, same altitude.

Type. Old male. B.M. no. 21. 1. 1. 2. Original number 1036. Collected 15th July, 1920, by E. Budin. Presented by Oldfield Thomas.

With the exception of the comparatively pale long-skulled *C. tucumanus* no *Cerdocyon* has been described from anywhere near this region, the nearest localities for *C. brasiliensis* being over 800 miles to the eastwards.

The unusually short, stout, inflated skull, with broad inter-orbital region, would seem to distinguish this Thous from any described form. Both skull and colour readily separate it from its neighbour *C. tucumanus*.

Pseudalopex zorrula, sp. n.

External appearance very much as in *P. gracilis*, but size much less.

Coloration quite as in *gracilis*, that of the type matching some of the more reddish-suffused specimens of that animal. Head, neck, backs of ears, and fore limbs strong ochraceous tawny. Back with the usual black and white grizzling, with ochraceous underfur. Under surface more or less smoky

greyish, tinged with buffy, chest and inguinal region whiter. The usual blackish chin-patch present, but not very strongly contrasted. Hind feet whitish, tinged with ochraceous externally. Tail as in *gracilis*.

Skull conspicuously smaller than in *gracilis*, with shorter muzzle and more globose brain-case. Nasals short, but as broad as in *gracilis*. Interorbital region broad, with sharply defined pointed postorbital processes, the concavity behind which is short and angular. Top of brain-case with a large lyrate intermuscular area, much larger than in similarly aged specimens of *gracilis*. Bullæ small.

Teeth as in *gracilis*, but smaller throughout.

Dimensions of the type:—

Head and body 670 mm.; tail 310; hind foot 110; ear 72.

Skull (those of an adult female *gracilis* in brackets): greatest length 115 (132); condylo-basal length 110.5 (128); zygomatic breadth 64 (63); orbit to tip of muzzle 46.5 (56.3); nasals 36 (44); interorbital space 22 (24); tip to tip of postorbital processes 34.7 (32); intertemporal breadth 28.3 (25.3); breadth of brain-case 43.7 (44); breadth of lyrate area on crown 27 (17); palatal length 58 (67); breadth between outer corners of m^1 34 (36); p^4 , length on outer edge 10.5 (11.3); combined length of p^4 and two molars 23.7 (24).

Hab. Chumbicha, Catamarca. Alt. 500 m.

Type. Old female. B.M. no. 18. 11. 11. 85. Original number 385. Collected 30th September, 1918, by E. Budin. Presented by Oldfield Thomas.

This fox, though externally similar to *P. gracilis*, has so very much smaller a skull that it should apparently be specifically distinguished. The short muzzle, the broad interorbital region with sharply defined postorbital processes, and the large lyrate intermuscular area on the crown all seem to indicate that it is distinct from the older-known species.

Specimens of *P. gracilis* are in the Museum from Tucuman (Vipos and Tapia), Cordova (Cruz del Eje), and Mendoza (Palmeira)—practically the type-locality. Further south foxes from Pilcañeu and the Valle de Lago Blanco, Chubut, represent *P. grisea*, a form from which *P. gracilis* is really most doubtfully distinguishable, as are also the "Chilla" foxes from west of the Andes. Perhaps *gracilis* should be treated as a subspecies of *grisea*, but, in any case, the fox with the peculiar small skull now described would seem to need a special name.

It is impossible to make any satisfactory identification of

the various foxes described by Philippi*, but most, if not all, of them would seem to have been the large Chilian fox (*Pseudalopex culpæa*) of different ages and sexes. It has been asserted—whether rightly or wrongly—that the owners of a farm near Santiago amused themselves by sending in to the aged Director of the Museum specimens of their local fox, which they labelled with various fictitious localities in distant parts of Chili, and that these became the bases of many of Philippi's species.

BIBLIOGRAPHICAL NOTICES.

British Mammals. Written and Illustrated by A. THORBURN, F.Z.S.
With 50 Plates in Colour and Pen-and-ink Sketches in the Text.
In Two Volumes. Vol. I. Longmans, Green, and Co. London,
1920.

MR. THORBURN and his publishers are to be congratulated on producing what is, perhaps, the most beautifully illustrated work on British Mammals which has ever appeared. The first volume, now before us, deals with the Chiroptera, Insectivora, and Carnivora, and just enters upon the Rodentia by giving accounts of the squirrel and dormouse.

The plates form the chief and most valuable feature of the book. Taken as a whole, they are remarkable for their good drawing and for their superb and faithful colouring. Many of them, indeed, are of exquisite beauty. The pictures of the pine-martin, pole-cat, fox, seals, and, above all, of the mole are especially attractive. That of the wild-cat is excellent as regards colour, but the reviewer cannot decide whether he likes the pose chosen or not—the figure looks a little too like that of a domestic kitten at play. The attitudes of the shrews are also not quite convincing; and the drawings of the bats, though very artistic, leave something to be desired as regards detail. In the latter case, no doubt, the difficulty of procuring living material of many species has seriously handicapped the artist.

The text naturally is of minor importance. It is, however, quite adequate for its main purpose of linking together and giving point to the beautiful pictures, which form the real contents of the book. It is attractively written, and will no doubt stimulate those younger naturalists fortunate enough to command the service of such a

* Arch. f. Nat. 1903, p. 155 *et seqq.*